



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

AUG - 9 2005

400 Seventh Street, S.W.
Washington, D.C. 20590

Ms. Jolynn Willink
Safety and Benefits manager
Department of Human Resources
The Field Museum
1400 S. Lake Shore Drive
Chicago, Illinois 60605-2496

Ref. No.: 05-0139

Dear Ms. Jolynn:

This responds to your letter dated June 6, 2005 regarding the Hazardous Materials Regulations (HMR; 49 CFR parts 171-180) as they apply to the shipment of zoology specimens. Specifically, you ask if the "dry" specimens (skeletons, skins, pinned insects) stored in 70% ethanol solution (fluid-preserved specimens) are subject to the HMR. You provided information, as follows:

The Zoology Department of the Field Museum maintains a collection of over 18 million specimens of mammals, birds, fishes, insects and other invertebrates, and amphibians and reptiles. The museum loans its specimens to researchers world-wide, and, to ensure the specimens are not damaged in transportation, each specimen is carefully packed.

The museum's current shipping procedure is a two-step process. The specimens are removed from their storage jars and wrapped in cheesecloth moistened with ethanol to protect the specimen from drying out. The cheesecloth-wrapped specimens are then placed into a plastic bag that is closed with a heat sealer. This bag is then heat-sealed inside a second bag, which is then heat-sealed inside a third bag, with sufficient absorbent material. There is no visible or free-flowing liquid at the time they are sealed. The bags are then packed in cardboard boxes and cushioned with styrofoam packing (peanuts).

A material described as "Ethanol solutions, UN1170" is classed as a Class 3 (flammable liquid), and is subject to the HMR for purposes of transportation in commerce. Although the cheesecloth-wrapped specimens are moistened with ethanol to protect the specimens from drying out, it is our opinion that the packaging procedures and methods you use for shipment of the dry specimens mitigate the minimal hazard that may be present during



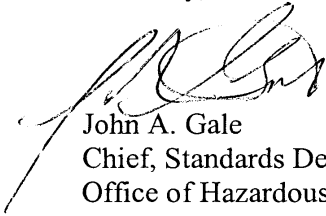
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transportation. Therefore, in accordance with § 73.120(d), shipments of the zoology specimens preserved in ethanol that are packaged as described above are not subject to regulation under the HMR.

I hope this satisfies your inquiry. If we can be of further assistance, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'John A. Gale', is written over the printed name.

John A. Gale
Chief, Standards Development
Office of Hazardous Materials Standards

Engrum
§ 172.101F
Applicability
05-0139

June 6, 2005

Mr. Edward T. Mazzullo
Director, Office of Hazardous Materials Standards
U.S. DOT/RSPA (DHM-10)
400 7th Street S.W.
Washington, D.C. 20590-0001

Dear Mr. Mazzullo,

I am writing to obtain a letter of interpretation concerning the shipment of preserved museum specimens. I hope that by providing you with technical information and an outline of our current shipping procedures, you can determine if we are subject to the requirements of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

The Zoology Department of the Field Museum maintains a collection of over 18 million specimens of mammals, birds, fishes, insects and other invertebrates, and amphibians and reptiles. This ranks us as one of the largest such collections in the world. While many of our specimens are "dry" (skeletons, skins, pinned insects), a significant number are stored in a 70% ethanol solution ("fluid-preserved" specimens), a standard practice in natural history museums worldwide.

Our collection exists, in part, to give the scientific community an opportunity to study specimens collected decades (or even centuries) ago, to answer questions about biodiversity, ecology, genetics, conservation, evolution, and virtually any other aspect of natural history. The collection is not unlike a library; although instead of books, we have beetles, snails, and lizards.

Just as a library loans out its books, we loan our specimens to researchers all over the world. Of course, this involves great care and effort to ensure our specimens are not damaged in transit (each specimen is unique and irreplaceable), but with careful packing this can be done. My question relates to the applicability of the HMR to our shipping procedures, specifically those used for fluid-preserved specimens.

Our current shipping procedure is a two-step process. First, the specimens are removed from their storage jars and wrapped in cheesecloth moistened with ethanol to protect the specimen from drying out. The cheesecloth-wrapped specimens are then placed into a plastic bag that is closed with a heat sealer. This bag is then heat-sealed inside a second bag, which is then heat-sealed inside a third bag, along with an appropriate amount of absorbent material. There is no visible liquid in the bags at the time they are sealed. The bags are then packed in sturdy cardboard boxes and cushioned by styrofoam packing "peanuts".

Packing is of critical importance to us since the specimens can suffer significant, permanent damage if allowed to dry out. Thus we take great pains (such as triple-bagging and the addition of absorbent material) to ensure the specimens are well-protected.

Based on our current shipping procedures as described in this letter, are we subject to the requirements of the HMR if we need to ship fluid-preserved specimens from our collection? If you need further information to make a determination, please feel free to contact me at (312) 665-7278.

Thank you very much for your time and I look forward to your response.



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